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| EXAMINER |
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YAMNITZKY, MARIE ROSE

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| ART UNIT | PAPER NUMBER |
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1774

DATE MAILED: 04/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/643,413

Applicant(s)

THOMPSON ET AL.

Examiner

Marie R. Yamnitzky

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2004 and 29 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) (same as listed below for rejected claims) is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6-9,12-17,19-24,26-33,35-39,41-59,61-64,68,70-73,75-80,82,84-88 and 90 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date rec'd 29 Mar 2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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1. This Office action is in response to applicant's amendment received December 27, 2004, which amends claims 1, 2, 4, 6-9, 12-16, 19-22, 24, 29, 33, 39, 41, 47-53, 59, 61-64, 68, 72, 73, 76, 80, 82, 84-86, 88 and 90 and cancels claims 3, 5, 10, 11, 18, 25, 34, 40, 60, 65-67, 69, 74, 81, 83 and 89.

Applicant's amendment did not include a status identifier for claim 68. The examiner notes that the proper status identifier for claim 68 as set forth in the December 27th amendment is "(currently amended)".

Claims 1, 2, 4, 6-9, 12-17, 19-24, 26-33, 35-39, 41-59, 61-64, 68, 70-73, 75-80, 82, 84-88 and 90 are pending.

2. Any issues raised in the rejections set forth in the Office action mailed September 22, 2004 that are not set forth in this action are either overcome by claim amendment or rendered moot by claim cancellation.

Regarding claim interpretation: For purposes of comparing to the prior art, the examiner interprets the narrower definition for R₃ as set forth in independent claim 1, and the narrower definition for at least one of R₃ and R₅ as set forth in independent claims 16, 24, 33, 47, 59, 64, 68 and 88, as a proviso. For purposes of comparing to the prior art, the examiner interprets claims 26-28 as if claim 26 is dependent from claim 24, and interprets claims 61-63 as if dependent from claim 59.

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3. Claims 24 and 26-32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 26-28 are included in this rejection as if claim 26 depends from claim 24.

The third line from the end of claim 24 sets forth " $C\equiv CR$ " as a substituent for an aryl or heteroaryl group from which one of R_3 and R_5 is selected when only one of R_3 and R_5 is CN. An aryl or heteroaryl group substituted with $C\equiv CR$ was not listed among the possibilities for any of the R variables in the original disclosure.

4. Claims 1, 2, 4, 6-9, 12-17, 19-24, 26-33, 35-39, 41-59, 61-64, 68, 70-73, 75-80, 82, 84-88 and 90 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The possibilities for R_3 as required for claim 1 and dependents, and the possibilities for at least one of R_3 and R_5 as required for claims 16, 24, 33, 47, 59, 64, 68, 88 and dependents, is not clear. Independent claim 1 sets forth a narrow definition for R_3 , defining this R variable in terms of approximate minimum Hammett value, followed by broader definition for all R variables (R_3 being part of " R_2 through R_5 ") in terms of a Markush group that includes members that do not have the specified Hammett value. The other independent claims recite that at least one of R_3

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and R_5 is CN, but also set forth a broader definition for R variables (including R_3 in the case of claims 16, 24, 33, 47, 59, 64, 68 and 88, and including R_5 in the case of claims 16, 24, 33, 47, 59, 68 and 88) in terms of a Markush group of possibilities that includes members other than CN. It is not clear if the claims are limited to the narrower definition or the broader definition.

Where R_3 is defined in terms of a substituent having an approximate minimum Hammett value, the scope of R_3 is also indefinite because the term “about” allows for some variation. It is not clear what the minimum actually is for the Hammett value.

The sixth line from the end of claim 24 includes “ C_nF_{2n+1} ”, but “n” in this possibility is not clearly defined.

The limitations of claim 26, with claims 27 and 28 dependent therefrom, are unknown as dependent from claim 24, which has been cancelled.

The limitations of claims 61-63 are unknown as dependent from claim 60, which has been cancelled.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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6. Claims 1, 2, 4, 8, 12, 13 and 15 stand rejected under 35 U.S.C. 102(e) as being anticipated by Lecloux et al. (US 2003/0108771 A1) as set forth in the Office action mailed September 22, 2004, and for the further reasons set forth below.

The rejection of claim 1 and dependents is maintained subject to clarification of the minimum Hammett value required for the substituent represented by R_3 . Since the term “about” allows some variation, the recitation that R_3 is a substituent having a Hammett value “greater than about 0.6” does not necessarily require that R_3 be a substituent having a Hammett value “greater than 0.6” (as in original claim 67). Lecloux et al. disclose compounds having the structure set forth in present claim 1 wherein R_3 is a substituent having a Hammett value of 0.54 (CF_3). If one considers 0.5, for example, to be “about” 0.6, then 0.54 is greater than about 0.6.

7. Claims 1, 2, 4, 6, 8 and 12-15 stand rejected under 35 U.S.C. 102(e) as being anticipated by Kamatani et al. (US 2003/0059646 A1) as set forth in the Office action mailed September 22, 2004, and for the further reasons set forth below.

In the September 22nd Office action, specific reference was made to Kamatani's compounds 445, 495, 519, 567, 584 and 872. Of these compounds, compounds 495, 519, 567 and 872 meet the limitations of the compound required by present claim 1 and various claims dependent therefrom, subject to clarification of the minimum Hammett value required for the substituent represented by R_3 . Since the term “about” allows some variation, the recitation that R_3 is a substituent having a Hammett value “greater than about 0.6” does not necessarily require that R_3 be a substituent having a Hammett value “greater than 0.6” (as in original claim 67).

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Kamatani's compounds 495, 519, 567 and 872 have the structure set forth in present claim 1 wherein R_3 is a substituent having a Hammett value of 0.54 (CF_3). If one considers 0.5, for example, to be "about" 0.6, then 0.54 is greater than about 0.6.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 2, 4, 6-8, 13 and 14 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Grushin et al. (US 2002/0121638 A1) as set forth in the Office action mailed September 22, 2004, and for the further reasons set forth below.

The rejection of claims 1, 2, 4, 6-8, 13 and 14 is maintained subject to clarification of the minimum Hammett value required for the substituent represented by R_3 . Since the term "about" allows some variation, the recitation that R_3 is a substituent having a Hammett value "greater than about 0.6" does not necessarily require that R_3 be a substituent having a Hammett value "greater than 0.6" (as in original claim 67). Grushin et al. suggest compounds having the structure set forth in present claim 1 wherein R_3 is a substituent having a Hammett value of 0.54 (CF_3). If one considers 0.5, for example, to be "about" 0.6, then 0.54 is greater than about 0.6.

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. Claims 1, 4, 6-8, 12-17, 19, 21-24, 26-33, 35-39, 41-59, 61-64, 68, 70-73, 76-80, 82, 84-88 and 90 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-7, 9, 13-20, 23, 24, 26, 29, 33, 37, 40, 41, 43 and 46 of copending Application No. 10/288,785. Although the conflicting claims are not identical, they are not patentably distinct from each other because there is substantial overlap between the subject matter of the present claims and the copending claims.

In addition, some of the present claims are generic for the subgenus of some of the copending claims. See *In re Braithwaite*, 379 F.2d 594, 154 USPQ 29 (CCPA 1967).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

12. Applicant is advised that should claim 37 be found allowable, claim 38 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an

application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

13. Applicant's arguments filed December 27, 2004 have been fully considered but they are not persuasive with respect to the issues set forth in this Office action.

Applicant's arguments regarding the prior art and the claim 1 recitation of a Hammett value greater than about 0.6 are addressed above.

With respect to the provisional obviousness-type double patenting rejection, the examiner notes that even if all other issues are resolved, the application cannot be allowed until the obviousness-type double patenting rejection is overcome or rendered moot.

With respect to the issue of claims 37 and 38 being substantial duplicates, contrary to applicant's remarks, claim 37 has not been amended.

14. Miscellaneous:

In line 2 of claims 8, 12, 41, 72, 76, 85 and 86, "emmisive" should read --emissive--.

A period is missing at the end of each of claims 8, 29, 45, 68 and 88.

Presuming the narrower limitation recited in claims 16, 47 and 68 for at least one of R_3 and R_5 is required, claims 21, 52 and 85 do not further limit the independent claim from which each directly or ultimately depends because at least one substituent (at least one of R_3 and R_5) will be the electron withdrawing group CN.

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In the line beginning "each of R₂" in claims 24 and 64, "R₆" should read --R'₆ --.

In the line beginning "at one of R₃" in claim 47, "at" should be deleted.

Presuming the narrower limitation recited in claim 88 for at least one of R₃ and R₅ is required, the phrase "R'₄ is...group and" should be deleted from lines 1-3 of claim 90 because at least one of R₃ and R₅ must be the electron withdrawing group CN.

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

16. Any inquiry concerning this communication should be directed to Marie R. Yamnitzky at telephone number (571) 272-1531. The examiner works a flexible schedule but can generally be reached at this number from 6:30 a.m. to 4:00 p.m. Monday, Tuesday, Thursday and Friday, and every other Wednesday from 6:30 a.m. to 3:00 p.m.

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The current fax number for Art Unit 1774 is (703) 872-9306 for all official faxes.
(Unofficial faxes to be sent directly to examiner Yamnitzky can be sent to (571) 273-1531.)

MRY
April 18, 2005

A handwritten signature in cursive script that reads "Marie R. Yamnitzky".

MARIE YAMNITZKY
PRIMARY EXAMINER

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